

Remarks/Arguments

Claims 1-26 are pending in the application. Restriction to one of the following inventions is required under 35 U.S.C. 121 between:

Group I. Claims 1, 2, 23 and 24, drawn to a method and a system for assessing brain state by analyzing mammalian brain electroencephalogram recordings using an eighth order autoregressive and fifth order moving average discrete time equation, classified in class 600, subclass 544;

Group II. Claims 3-17 and 26, drawn to a method of assessing brain state by assessing the state of the brain by reference to the position and distribution of at least some of a clusters of poles as mapped in the complex plane, or the movement of at least some of a clusters of poles as mapped in the complex plane, classified in class 600, subclass 544;

Group III. Claim 18, drawn to a method of assessing the efficacy of a cognitively active pharmaceutical agent, classified in class 600, subclass 544;

Group IV. Claim 19, drawn to a method of assessing the state of vigilance or alertness of a subject, classified in class 600, subclass 544;

Group V. Claim 20, drawn to a method of assessing the state of sleep of a subject, classified in class 600, subclass 544;

Group VI. Claims 21-22, drawn to a method of assessing the state of anaesthesia of a subject, classified in class 600, subclass 544; and

Group VII. Claim 25, drawn to an apparatus for assessing brain state of a subject, classified in class 600, subclass 544.

The Office Action states that restriction is required because the inventions are distinct with Inventions Group I

through Group VII related as subcombinations disclosed as usable together in a single combination. Specifically, the action asserts that subcombination Group I has separate utility such as a method and a system for assessing brain state by analyzing mammalian brain electroencephalogram recordings using an eighth order autoregressive and fifth order moving average discrete time equation. As a final basis for restriction, the Office Action indicates that there would be a serious search and examination burden if restriction were not required.

Applicant respectfully traverses the Restriction Requirement for the reasons as provided below. However, in order for this requirement to be complete as provided by, inter alia, 37 C.F.R. § 1.143, Applicant elects the invention as defined by Group II and identifies the claims encompassing the elected invention as 3 - 17 and 26 with traverse. Accordingly, claims 1, 2, and 18 - 25 are withdrawn.

Distinct & Specific Support for Applicant's Traversal of the Restriction Requirement

"If the applicant disagrees with the requirement for restriction, he may request reconsideration and . . . modification of the requirement, giving the reasons therefor." MPEP § 818.03. Applicant disagrees with and thus traverses the Restriction Requirement to the extent that restriction between Group I (claims 1, 2, 23 & 24) and Group II (claims 3 - 17 and 26) is required and requests modification of the Restriction Requirement to allow Applicant to elect and pursue the claims of both Groups I and II (claims 1, 2, 23 & 24 and 3 - 17 & 26) because Group II represents a specific subcombination of Group I, and the claims of claims of Groups I and II do not have separate utility.

The claims of Group I are directed to a method and system for assessing brain state by analysing mammalian brain electroencephalogram (EEG) recordings using an eighth order autoregressive and fifth order moving average discrete time equation, and the claims of Group II are drawn to a method for assessing brain state by assessing the state of the brain by reference to the position and distribution of at least some of a clusters of poles as mapped in the complex plane, or the movement of at least some of the clusters of poles as mapped in the complex plane, which is, in pertinent part, is accomplished by the equations and method steps presented in the claims. (See claims 1, 2, 23 & 24 and 3 - 17 & 26). According to Applicant's Specification, the equations and steps corresponding to those presented in Applicant's Group II claims are identified as representing a specific embodiment of an (8, 5) order ARMA ("AR", auto-regressive; "MA", moving average) equation, or an eighth order autoregressive and fifth order moving average discrete time equation, and thus represent a specific embodiment (subcombination) of an eighth order autoregressive and fifth order moving average discrete time equation of the equation generally disclosed in the broader Group I combination claim. (See specifically, paragraphs [0011 - 0012, 0164 - 166] of Applicant's Disclosure as provided in U.S. Pub. No. 2006/0135879 A1, and generally, the remaining disclosure of Applicant's SUMMARY OF THE INVENTION & DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS OF THE INVENTION).

Therefore, based upon the Applicant's disclosure, Applicant respectfully disagrees with the Office Action's characterization of the claims of Groups I and II as defining subcombinations disclosed together in a single combination. Instead, Applicant respectfully asserts that the claims of Group I represent a

broad combination directed to a method and system for assessing brain state by analysing mammalian brain electroencephalogram (EEG) recordings using an eighth order autoregressive and fifth order moving average discrete time equation, and the claims of Group II represent a specific subcombination of Group I, as the Group II claims define specific eighth order autoregressive and fifth order moving average equations and method steps to achieve the common purpose of assessing brain state by analysing mammalian brain electroencephalogram (EEG) recordings as provided by the claims of Group I.

Furthermore, Applicant respectfully disagrees with the Office Action's assertion that Group I has separate utility from Group II. "The burden is on the examiner to suggest an example of separate utility. If applicant proves or provides an argument, supported by facts, that the utility suggested by the examiner cannot be accomplished, the burden shifts to the examiner to document a viable separate utility or withdraw the requirement." MPEP § 806.05(c). As provided above, Applicant's claims and specification indicate that the broadly claimed eighth order autoregressive and fifth order moving average discrete time equation of the Group I claims and the specifically claimed equations and steps of the Group II claims are both directed to the singular purpose of assessing brain state by analysing mammalian brain electroencephalogram (EEG) recordings using an eighth order autoregressive and fifth order moving average discrete time equation, and no evidence or examples have been presented which as evidence of separate utility. "Where a combination as claimed does not require the details of the subcombination as separately claimed and the subcombination has separate utility, the inventions are distinct and restriction is proper". Id. (emphasis added). In the

instant case, the Group II subcombination does not contain a separate utility from the broader combination of Group I because each Group is directed to achieving the same specific purpose, and thus restriction is not proper. Furthermore, if the above remarks are construed in any way to traverse the Restriction Requirement on the basis that the inventions are not patentably distinct (although Applicant considers the above traversal to be based upon a lack of separate utility), in order to ensure compliance with the requirements as provided by Page 5 of the 01/26/2010 Office Action requiring Applicant to identify evidence of record showing the inventions to be obvious variants, Applicant specifically identifies paragraphs [0006, 0011 - 0012, 0164 - 0166] and generally, paragraphs [0127 - 0183] of Applicant's Disclosure as provided in U.S. Pub. No. 2006/0135879 A1 which establish that the invention of the claims of Group I is a broad disclosure of the narrowly claimed, specific equation and method steps disclosed by the claims of Group II, thus making the invention of Group I an obvious variant of that of Group II.

Finally, "[w]here a combination as claimed does not require the details of the subcombination as separately claimed and the subcombination has separate utility, the inventions are distinct and restriction is proper if reasons exist for insisting upon the restriction, i.e., there would be a serious search burden if restriction were not required as evidenced by separate classification, status, or field of search." Id. (emphasis added). "Furthermore, restriction is only proper when there would be a serious burden if restriction were not required, as evidenced by separate classification, status, or field of search." MPEP § 806.05(c). The inventions of Group I and Group II are indicated as being in the same classification (class

600), subclassification (544), and, based upon the above, would likely be in the same field of search as Groups I and II broadly and narrowly disclose an eighth order autoregressive and fifth order moving average discrete time equation directed to the common purpose of assessing brain state by analysing mammalian brain electroencephalogram (EEG) recordings. Based upon the foregoing, Applicant traverses the Restriction between Groups I and II and requests modification of the Restriction Requirement to allow Applicant to elect and pursue the claims of both Groups I and II (claims 1, 2, 23 & 24 and 3 - 17 & 26) because Group II represents a specific subcombination of Group I, and the claims of claims of Groups I and II do not have separate utility and would not impose a serious search burden making Restriction improper.

CONCLUSION

In order for this requirement to be complete as provided by, inter alia, 37 C.F.R. § 1.143, Applicant elects the invention as defined by Group II and identifies the claims encompassing the elected invention as 3 - 17 and 26 with traverse. Accordingly, claims 1, 2, and 18 - 25 are withdrawn.

If any issues remain that may be expeditiously addressed in a telephone interview, the Examiner is encouraged to telephone the undersigned at 515-558-0200.

All fees or extensions of time believed to be due in connection with this response are attached hereto; however, consider this a request for any extension inadvertently omitted, and charge any additional fees to Deposit Account 50-2098.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'TJZ', with a large, stylized loop at the end.

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